

## 11. HOW DO I MANAGE AGRICULTURAL HERBICIDES/ PESTICIDES USED AT MY COOPERATIVE?

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Many rural electric cooperatives may at some time store, apply (or have applied), and dispose of pesticides. Herbicides can be used to eliminate or inhibit tree and weed growth around power lines and cooperative facilities, while insecticides may be used to control insects at cooperative facilities. Although the Federal Insecticide, Fungicide and Rodenticide Act (FIFRA) primarily regulates the manufacture and registration of pesticides, consequences for not complying with FIFRA also exist for pesticide users. The pesticide regulations can be found at 40 CFR Part 150. FIFRA requires that all pesticides be registered for every intended use, and that labels containing instructions for proper storage, use, and disposal accompany each pesticide marketed. Under FIFRA, it is considered illegal to use a pesticide in a manner inconsistent with its labeling. While application and handling of pesticides are product-specific, a cooperative can be held responsible if any pesticides applied on their property is misapplied or mishandled.

This chapter discusses good practices for rural electric cooperatives to ensure that pesticides are not misused. It is divided into two sections, one that discusses considerations for electrical cooperatives that contract out their pesticide applications, and one that discusses considerations for electrical cooperatives that apply their own pesticides. Excess pesticides that must be disposed may, in some cases, be considered hazardous waste, and must be managed accordingly. A discussion of the requirements for managing hazardous wastes and substances are provided in Chapter 3 (wastes) and Chapter 6 (substances).

### 11.1 WHEN APPLICATION IS CONTRACTED

While some cooperatives may elect to hire a contractor for all of their pesticide applications, all cooperatives may have to contract out pesticide applications at one point or another. Under FIFRA, some pesticides deemed by EPA to have high toxicity or to pose particular environmental hazards may only be applied by certified pesticide applicators. These are referred to as restricted use pesticides (RUPs). Pesticide labels will clearly state whether a particular pesticide is restricted use only. Unless a cooperative chooses to certify

#### USEFUL TIP

When a pesticide is applied by a contractor, the contractor and the person contracting for the service may be held responsible for pesticide misuse. To avoid hazards to humans or environmental damage, a cooperative should at all times ensure that a pesticide is properly applied.

some employees in pesticide application, applications of restricted use pesticides will require the use of a contractor.

Use best management practices

Your selection of pesticide(s) should be based on the type of pests or weeds to be controlled, and the most environmentally sound applications. Best management practices for pesticide application include selecting pesticides with low mobility or toxicity to protect both humans and the environment, and use of pesticides that target individual pests or weeds. Alternatives should be considered when selecting a pesticide such as those that require the minimum amount of active ingredient to be applied to control a problem.

### USEFUL TIP – SELECTING PESTICIDES

Your local agricultural cooperative or extension can provide guidance when selecting the most appropriate pesticide to use. In addition, pesticide labels provide detailed information as to the appropriate use of a pesticide.

Monitor the contractor's work

Cooperatives should always verify that their contractor uses the correct pesticide application rate and method. The pesticide label contains detailed information on appropriate rates and methods of application. The actual application should be observed to ensure that application methods are correct.

Minimize spray drift

One source of environmental contamination from pesticides is drift of liquid or dust pesticides onto areas not intended for application. In addition to possibly contaminating water sources, pesticide spray drift can kill trees, plants, or insects not intended to be treated. Whether the cooperative or a contractor is applying a pesticide, several methods can be used to minimize spray drift. These include:

- Using pesticides formulated in granules or pellets;
- Adjusting spray equipment to optimize droplet size;
- Releasing pesticides as close to the target as possible; and
- Never applying pesticides during windy conditions that increase the chance of pesticides drifting away from the target.

## 11.2 WHEN THE COOPERATIVE APPLIES PESTICIDES

For pesticides that are not restricted use, your cooperative may purchase, store, apply, and dispose of the pesticides. This section discusses considerations for storage, application, and disposal of pesticides that can be used by rural electric cooperatives, and recordkeeping of those applications.

### USEFUL TIP

The most important consideration when dealing with pesticides that you apply yourself is that the label directions must be adhered to at all times.

### 11.2.1 Pesticide Storage

The EPA has published recommendations for storage of pesticides (U.S. EPA 1991). While these storage procedures are not mandatory, they are recommended as useful guidelines for safe pesticide storage. In addition, storage conditions may be listed on the pesticide label.

### USEFUL TIP

The EPA storage guidelines for pesticides provide that, in general, persons in possession of excess pesticides should either store them for future use, or attempt to return them to the manufacturer for relabeling or reprocessing.

Storage site  
recommend-  
ations

Storage sites should be chosen to minimize potential environmental impacts. Pesticides should be stored in facilities separate from other chemicals and processes for a cooperative. This minimizes both fire and release hazards. Pesticides should not be stored in areas susceptible to flooding or where the characteristics of the soil at the site allow leaching into ground water. Storage facilities should be dry, well ventilated, and secure. Floors should be made of impermeable materials (e.g., concrete) with curbs and a sump to deal with accidental spills or leaks. Stored pesticides should be well-labeled, segregated (i.e., the same pesticides should be stored together separated from other pesticides), and stored off of the ground. Further precautions include using appropriate warning signs, regular inspection of stored containers for corrosion and leakage, and protective, fire extinguishing, and decontamination equipment kept at the storage site.

## 11.2.2 Application or Use of Pesticides

Amounts  
to use

FIFRA requires that every pesticide be registered and labeled with both the appropriate application methods and the appropriate amounts to be used in a particular application. To minimize potential environmental impacts, the minimum application rate that is effective should always be used. It is a violation of FIFRA to apply a pesticide in a manner inconsistent with its label. Therefore, a cooperative should carefully read the label of any pesticides used and use the amounts specified by the label. Section 2(ee) of FIFRA does allow for some variances to the label requirements.

### **POLLUTION PREVENTION TIP**

Cooperatives should try to order only the amounts of pesticides needed at the time of application. Manufacturers may allow a cooperative to return unused or unopened products.

Use of  
mixing pads

Pesticide application includes mixing and application of the pesticide. Mixing should be conducted at a mixing site where structures exist to contain any spills. These structures can be permanent, as in a concrete mixing pad with curbs, or temporary, as in portable plastic pads. Temporary pads can be used to minimize spills if pesticides are mixed at the application site. Permanent pads can be covered to minimize pesticide migration in rain or snow that would fall on an uncovered pad.

Mixing pad  
precautions

Pesticide applicators should prevent flow back into the water source as pesticides are mixed to prevent contamination of the water source. This can be done by keeping hoses above the water line in the mixing tank, maintaining a six-inch air gap between the hose and the sprayer tank, installing anti-backflow devices on all pipes leading to pesticide storage and mixing areas, or using a closed handling system to mix pesticides.

Locating  
mixing pads

Mixing and loading pads should be located at more than minimum distances away from surface water, wells, fuel tanks, public roads, property lines, water lines, and adjacent buildings. These distances are generally specified by the State, and cooperatives should check with the State before constructing mixing or loading sites.

Worker  
Protection  
Standards  
(WPS)

EPA has issued guidance on pesticide worker protection (EPA, 1994) that specifies additional requirements for training, protective equipment, and posting of warning signs associated with an application. Cooperatives are not subject to these guidelines, but should observe them as pesticides are applied.

## 11.2.3 Post-application Clean Up and Pesticide Disposal

After pesticides are used, application equipment must be cleaned and empty containers disposed of. Liquid pesticide containers may be triple rinsed and disposed of in municipal solid waste landfills. Dry chemical bags should always be emptied

completely. If permitted by the pesticide label, these bags may be burned where the pesticide is applied if that site is far enough away from populated areas. Otherwise, they may be disposed of in a licensed landfill or incinerator (see Chapter 3).

**USEFUL TIP**

Many applicators are now accepting plastic pesticide containers for recycling, or they may provide reusable containers that can be refilled.

All mixing pads should be cleaned at the end of each application to ensure that pesticides do not migrate from the pad during periods when application is not occurring. The rinse water from the cleaning, if not reused, may be considered hazardous and should be disposed of accordingly (see Chapter 3). Rinsates from equipment, mixing/loading pads, or pesticide containers may be applied to the use area if permitted by the pesticide label. Otherwise, they may be considered hazardous and should be disposed of accordingly (see Chapter 3).

Disposing of unused pesticides depends on the type of pesticide. Organic pesticides (excluding organic mercury, lead, cadmium and arsenic) may be incinerated in pesticide incinerators if permitted by the pesticide label. Metallo-

organic pesticides and inorganic pesticides (including organic mercury, lead, cadmium and arsenic) require special treatment to recover heavy metals or deactivate the pesticide residues. If such treatment is unavailable, metallo-organic pesticides may be disposed of in a landfill specially licensed for this purpose. Inorganic pesticides (including organic mercury, lead, cadmium and arsenic) must be encapsulated before disposal at a properly licensed facility.

**USEFUL TIP**

Be sure to ask the disposal facility you contract with if they are licensed to accept the type of pesticide wastes you are disposing.

### 11.2.4 Pesticide Use/Applicator Training

Restricted  
Use  
Pesticides

As noted in Section 11.1, certain pesticides are classified by the EPA as restricted use based on toxicity or environmental hazard. These pesticides may be applied only by a licensed applicator. EPA sponsors a Pesticide Applicator Training Program that is administered by the States, largely through local extensions or agricultural cooperatives. These local

agencies should be contacted to receive training in pesticide application to become a licensed applicator.

### Other Pesticides

Pesticide worker protection standards promulgated by the EPA require that pesticide workers receive training in the proper application of pesticides within five days of entering an area where pesticides are being applied. EPA does not require right-of-way workers to comply with the WPS. However, it is good practice for employees working with pesticides to receive training to ensure that pesticides are applied properly.

## 11.2.5 Recordkeeping

Best management practices for pesticides include keeping accurate records of use and storage. Records of use are necessary to track when the next application should occur to control weed or pest problems. Frequency of application is determined by label directions. Records of pesticides stored allow for inventory management, so that oldest pesticides can be used first, and so that excess pesticides are not purchased and stored. In addition, accurate recordkeeping for pesticide storage can be crucial in the event of an accidental spill or fire, so that emergency responders can know exactly the hazards posed.

## 11.3 RESOURCES

Local agricultural extensions (often run through universities) or cooperatives will provide the best source of information on the proper use and storage of pesticides, as well as for training for pesticide application. In some States, a State agency is responsible for the training. In addition, there is the EPA Agriculture Compliance Assistance Center, which can be reached at:

Agriculture Compliance Assistance Center  
726 Minnesota Avenue  
Kansas City, KS 66101  
(913) 551-7207 - phone  
(913) 551-7270 - fax  
<http://es.inel.gov/oeca/ag/aghmpg.html>

Additional guidance may be available from the National Pesticide Telecommunication Network at 1-800-858-7378.

### 11.3.1 References

Markley R.W., 1997. *Kahiltna Pesticide Record Keeping Database*, available at <http://www.maine.com/users/rmarkey/agprog.html>

U.S. EPA, 1994. *Worker Protection Inspection Guidance*. EPA 722-B-94-002, Office of Prevention, Pesticides and Toxic Substance, January 1994.

U.S. EPA, 1991. *FARMFERT*. Computer software providing guidance on proper handling and storage of pesticides, available at <http://www.epa.gov/grtlakes/seahome/farmpest.html>